## CLAIMS

What is claimed as new and desired to be protected by Letters Patent of the United States is:

1.      A method for associating at least one rule with a key, comprising:

arranging a plurality of objects in a table that is based on an ordering of information associated with each object;

if the key is provided, employing at a search method to determine a starting entry in the table;

if the starting entry in the table is unequal to the provided key, employing another search method to determine an object in the table that is relatively equivalent to the key; and

enabling the processing of the key based on at least one rule associated with the object.

2.      The method of Claim 1, wherein the search method includes at least a binary search.

3.      The method of Claim 1, wherein the search method determines if the provided key is equal to a single key associated with one object in the table.

4.      The method of Claim 1, wherein the search method determines if the provided key is equal to a lower bound of a range of keys associated with one object in the table, wherein the other search method operates in a left direction across the table.

5.      The method of Claim 1, wherein the search method determines if the provided key is equal to an upper bound of a range of keys associated with

one object in the table, wherein the other search method operates in a right direction across the table.

6. The method of Claim 1, wherein the key is at least one of an IP address and a telephone number.

7. The method of Claim 6, wherein the key is the IP address and information associated with the object includes at least one of a bound IP address, sister bound IP address, type, index, sister index, and rule.

8. The method of Claim 1, wherein the table includes at least an array, wherein the information associated with each object is sorted in the array.

9. The method of Claim 1, wherein the other search method further includes:

searching from the starting entry in a left direction across the table to iteratively determine a lower bound of a range of keys associated with one object that is relatively equivalent to the provided key, wherein the other search method enables jumping over other objects in the table to determine the relatively equivalent lower bound; and

enabling the processing of the key based on at least one rule associated with the one object that is associated with the relatively equivalent lower bound.

10. The method of Claim 1, wherein the other search method further includes:

searching from the starting entry in a right direction across the table to iteratively determine an upper bound of a range of keys associated with one object that is relatively equivalent to the provided key, wherein the other search method

enables jumping over other objects in the table to determine the relatively equivalent upper bound; and

enabling the processing of the key based on at least one rule associated with the one object that is associated with the relatively equivalent upper bound.

11.    A network device for associating at least one rule with a key, comprising:

a memory for storing instructions;

a processor for enabling actions based on the instructions, including:

arranging a plurality of objects in a table that is based on an ordering of information associated with each object;

if the key is provided, employing at a search method to determine a starting entry in the table;

if the starting entry in the table is unequal to the provided key, employing another search method to determine an object in the table that is relatively equivalent to the key; and

enabling the processing of the key based on at least one rule associated with the object.

12.    The network device of Claim 11, wherein the search method includes at least a binary search.

13.    The network device of Claim 11, wherein the search method determines if the provided key is equal to a single key associated with one object in the table.

14.  The network device of Claim 11, wherein the search method determines if the provided key is equal to a lower bound of a range of keys associated with one object in the table, wherein the other search method operates in a left direction across the table.

15.  The network device of Claim 11, wherein the search method determines if the provided key is equal to an upper bound of a range of keys associated with one object in the table, wherein the other search method operates in a right direction across the table.

16.  The network device of Claim 11, wherein the key is at least one of an IP address and a telephone number.

17.  The network device of Claim 16, wherein the key is the IP address and information associated with the object includes at least one of a bound IP address, sister bound IP address, type, index, sister index, and rule.

18.  The network device of Claim 11, wherein the network device operates as at least one of a router, firewall, switch, hub, and server array controller.

19.  The network device of Claim 11, wherein the other search method further includes:

searching from the starting entry in a left direction across the table to iteratively determine a lower bound of a range of keys associated with one object that is relatively equivalent to the provided key, wherein the other search method enables jumping over other objects in the table to determine the relatively equivalent lower bound; and

enabling the processing of the key based on at least one rule associated with the one object that is associated with the relatively equivalent lower bound.

20.    The method of Claim 11, wherein the other search method further includes:

searching from the starting entry in a right direction across the table to iteratively determine an upper bound of a range of keys associated with one object that is relatively equivalent to the provided key, wherein the other search method enables jumping over other objects in the table to determine the relatively equivalent upper bound; and

enabling the processing of the key based on at least one rule associated with the one object that is associated with the relatively equivalent upper bound.

21.    A network device for associating at least one rule with a key, comprising:

a means for arranging a plurality of objects in a table that is based on an ordering of information associated with each object;

a means for employing at a search method to determine a starting entry in the table if the key is provided;

a means for employing another search method to determine an object in the table that is relatively equivalent to the key if the starting entry in the table is unequal to the provided key; and

a means for enabling the processing of the key based on at least one rule associated with the object.